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EXAMINER

SHAY, D

ART UNIT PAPER NUMBER

3739

22

DATE MAILED: 10/27/00

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

- ☒ This application has been examined ☒ Responsive to communication filed on August 15, 2009 ☒ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- | | |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input type="checkbox"/> Notice re Patent Drawing, PTO-948. |
| 3. <input type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449. | 4. <input type="checkbox"/> Notice of Informal Patent Application, Form PTO-152. |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474. | 6. <input type="checkbox"/> _____ |

Part II SUMMARY OF ACTION

1. ☒ Claims 1, 3-12, 14-17, 20-30, 32-44, 47-50, 52+53 are pending in the application.

Of the above, claims _____ are withdrawn from consideration.

2. ☒ Claims 2, 13, 18, 19, 31, 43, 46, +51 have been cancelled.

3. ☐ Claims _____ are allowed.

4. ☒ Claims 1, 3-12, 14-17, 20-30, 32-44, 47-50, 52, +50 are rejected.

5. ☐ Claims _____ are objected to.

6. ☐ Claims _____ are subject to restriction or election requirement.

7. ☐ This application has been filed with Informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8. ☐ Formal drawings are required in response to this Office action.

9. ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable. ☐ not acceptable (see explanation or Notice re Patent Drawing, PTO-948).

10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____ has (have) been ☐ approved by the examiner. ☐ disapproved by the examiner (see explanation).

11. ☐ The proposed drawing correction, filed on _____, has been ☐ approved. ☐ disapproved (see explanation).

12. ☐ Acknowledgment is made of the claim for priority under U.S.C. 119. The certified copy has ☐ been received ☐ not been received
☐ been filed in parent application, serial no. _____; filed on _____.

13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. ☐ Other

EXAMINER'S ACTION

Art Unit: 3739

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 16, 17, 20-30, 32-44, 47-50, 52 and 53 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 16, 20, 32 and 47 what structure is intended to be indicated by a portion "of variable length" is unclear as this term lacks antecedent basis in the original specification. For the purposes of examination, this term will be interpreted to indicate that the structure can be inserted a varying distance into the body. Also in claim 16 exactly what is to be encompassed by the term "electronically connected" is unclear, as there is no disclosure of any electronics per se in the connection between the energy and the light source. For the purposes of examination, the term will be read as -- electrically connected --.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 16 and 17 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had

Art Unit: 3739

possession of the claimed invention. The "X-ray generating light source" is actually the collapsing cavitation bubbles (see Vona et al, page 706, fourth paragraph). Applicant has disclosed no electrical connection to the cavitation bubbles.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 5-8, 10-12, and 15-17 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Takayama et al.

Claim 16 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Parker et al.

Claims 3, 4, 9, 14, 20-30, 32-44, 47-50, 52, and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takayama et al in combination with Champelon et al ('526).

Takayama et al teach a device as claimed except for the specific recitation that it be placed in the body. Chapelon et al teach the equivalence of applicators for extracorporeal and intracorporeal use. It would have been obvious to the artisan of ordinary skill to configure the device of Takayama et al for intracorporeal use, by employing the pressure wave generator of Champelon et al ('526), since this lends itself to intracorpor^{al} application, as taught by Champ^elon et al ² ('526) and to use the particular, pressure generating crystal and various beam directing elements or other housing modifications, since these are well known in the art, as well as to employ any of the other light sources claimed, since these are equivalents and can be used for tissue identification via transmittance, reflectance, fluorescence, or Raman spectra, official^{notice} of all of the ² foregoing having already been taken and the notoriousness in the art of the use of such sources

Art Unit: 3739

already officially noticed having been shown by the references already supplied, thus producing a device such as claimed.

Regarding claim 1 applicant appears to be arguing that the recitation in section (iii) should be treated as a means under the sixth paragraph 35 USC 112, however applicant has not employed the proper "means for" language to invoke the sixth paragraph (see OG July 25, 2000).

Even ^{if} ~~of~~ this were language of the proper form, the recitation of the lens is too much structure to support the invocation of the sixth paragraph. However, even assuming, arguendo, that the claims could be construed to claim a lens to the exclusion of all else, the non-planar surface of the water in the device of Takayama is considered to fulfill the recitation. Applicant then argues Takayama does not teach a "sonoluminescent light module" (emphasis in original); further arguing that sonoluminescence refers to luminescence generated by high frequency sound waves, referring to page 12, lines 5-6 of the instant specification; and lastly arguing that Takayama does not describe the production of light by soundwaves. The examiner will address these arguments from last to first. Firstly, under section 102 of the statute, it is not necessary for Takayama to discuss the production of light, it is merely required that light be produced thereby. Beginning at the second column on page 706 of Vona et al, it is clearly stated in the first sentence of the first full paragraph therein that devices such as Takayamas produce sonoluminescence. This is attributed to the "high amplitude pressure fronts" in the first sentence of column 2 on page 706. The abstract of Vona et al notes that the devices have a maximum pressure excursion of 52 Mpa. Since 52 ^m ~~megap~~ascals is equal to a little over 513 atmospheres (1 atmosphere is equal

Art Unit: 3739

to 101325 Pascals), the device of Takayama, which produces thousands of atmospheres (see column 7, lines 31-32,) clearly exceeds the pressure threshold for producing sonoluminescence. Since sonoluminescence is clearly produced by the device of Takayama, it clearly constitutes a "sonoluminescent module" within the broadest reasonable interpretation of the term, as applicant has pointed to no structure differentiating the Takayama device and a sonoluminescent module, the the assertion that the Takayama device is not a sonoluminescent module, standing alone, is not persuasive.

Applicant then argues that the housing does not have an optically transparent portion. The examiner must disagree, as part of the light of produced are x-rays, the housing is clearly transparent to the radiation, and thus is "optically transparent" as the term is broadly construed in light of the specification.

Regarding the Champelon ('526) reference, the examiner respectfully invites applicants' attention to column 12, lines 38-47 thereof wherein the "therapy device" as shown in figure 1 and 8 of Champelon, for example, is described as "an intracavity device". The reference to figure 9 pointed to by applicant, is not the teaching upon which the examiner is relying. Since Takayama inherently produces sonoluminescence since neither Takayama nor Champelon lack any feature relied upon by the examiner and since the equivalence of the various light sources has been set forth in the specification and by official notice by the examiner both of which remain undisputed by applicant, the rejections are proper.

Art Unit: 3739

Applicant's arguments filed August 15, 2000 have been fully considered but they are not persuasive. .

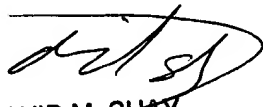
Applicant's arguments with respect to claims 16 and 17 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication should be directed to David Shay at telephone number (703) 308-2215.

David Shay:bhw
October 13, 2000


DAVID M. SHAY
PRIMARY EXAMINER
GROUP 330